

## PROJECT DESCRIPTION

### GENERAL

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 146 AND HESS ROAD IN HARFORD COUNTY. STREET LIGHTING AND STREET NAME SIGNS ARE EXISTING AT THE INTERSECTION.

THE SIGNAL STRUCTURE IN THE SOUTHEAST QUADRANT SHALL BE REPLACED. THE STREET NAME SIGN AND THE LIGHTING ARM WITH LAMP EFFECTED BY THIS MODIFICATION SHALL BE RELOCATED.

MD 146 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

### INTERSECTION OPERATION

THE INTERSECTION WILL CONTINUE TO OPERATE IN A NEMA FOUR PHASE, FULL TRAFFIC ACTUATED MODE. MD 146 APPROACHES OPERATE CONCURRENTLY AND HESS ROAD APPROACHES ALSO OPERATE CONCURRENTLY. THE NEMA SIZE 6 BASE-MOUNTED CABINET AND ALL INTERNAL EQUIPMENT SHALL REMAIN.

## EQUIPMENT LIST

### A. EQUIPMENT TO BE SUPPLIED BY THE SHA.

| ITEM | QUANTITY | DESCRIPTION  |
|------|----------|--|
| 9008 | 1 EA     | 12" X 30' STRAIN POLE<br>FOUR-1 $\frac{3}{4}$ " X 90" ANCHOR BOLTS |

## EQUIPMENT LIST (cont)

### B. EQUIPMENT TO BE FURNISH AND INSTALLED BY THE CONTRACTOR.

| ITEM | QUANTITY | DESCRIPTION   |
|------|----------|---|
| 1001 | 1 EA     | MAINTENANCE OF TRAFFIC  |
| 2002 | 1 CY     | TEST PIT EXCAVATION   |
| 8000 | 250 LF   | TO BE NEGOTIATED - FURNISH AND INSTALL ELECTRICAL CABLE-<br>2 CONDUCTOR (NO.12 AWG) TYPE TRAY   |
| 8015 | 27 EA    | FURNISH AND INSTALL 12 INCH VEHICULAR TRAFFIC SIGNAL<br>HEAD SECTION (POLYCARBONATE/BLACKFACED) |
| 8026 | 1 EA     | INSTALL STRAIN POLE (ANY SIZE)  |
| 8028 | 1 EA     | REMOVE AND DISPOSE OF EQUIPMENT (PER ASSIGNMENT)  |
| 8029 | 1 EA     | REMOVE FOUNDATION 12 INCH DEPTH   |
| 8033 | 10 LF    | FURNISH AND INSTALL 3 INCH SCHEDULE 80 RIGID PVC CONDUIT - TRENCHED                             |
| 8036 | 5 SF     | RELOCATE EXISTING SIGN  |
| 8038 | 30 LF    | FURNISH AND INSTALL NO. 6 AWG STRANDED BARE COPPER GROUND WIRE                                  |
| 8062 | 60 LF    | FURNISH AND INSTALL ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)                                 |
| 8049 | 1 EA     | FURNISH AND INSTALL ELECTRICAL HANDHOLE   |
| 8057 | 1 EA     | FURNISH AND INSTALL GROUND ROD $\frac{3}{4}$ INCH DIAMETER X 10 FOOT LENGTH                     |
| 8063 | 670 LF   | FURNISH AND INSTALL ELECTRICAL CABLE - 7 CONDUCTOR (NO.14 AWG)                                  |
| 8067 | 180 LF   | FURNISH AND INSTALL STEEL SPAN WIRE $\frac{1}{4}$ INCH DIAMETER                                 |
| 8068 | 180 LF   | FURNISH AND INSTALL STEEL SPAN WIRE $\frac{3}{8}$ INCH DIAMETER                                 |
| NEG  | 1 EA     | RELOCATE THE EXISTING LIGHTING ARM AND LUMINAIRE  |

## PROJECT CONTACTS

THE CONTACT PERSONS FOR  
DISTRICT 4 ARE AS FOLLOWS:

MR. SCOTT RANDALL  
ASSISTANCE DISTRICT ENGINEER-TRAFFIC  
PHONE: 410-321-2781/2885

MR. JOSEPH MCMAHON  
DISTRICT UTILITY ENGINEER  
PHONE: 410-321-2841

MR. DAVE RAMSEY  
ASSISTANT DISTRICT ENGINEER-MAINTENANCE  
PHONE: 410-321-2761

THE CONTACT PERSONS FOR  
SHA -DOTS ARE AS FOLLOWS:

MR. RICHARD L. DAFF, SR.  
CHIEF, TRAFFIC OPERATION DIVISION  
PHONE: 410-787-7630

MR. ROBERT SNYDER  
ASST. CHIEF, TRAFFIC OPERATION DIVISION  
PHONE: 410-787-7631

MR. ED RODENHIZER  
CHIEF, SIGNAL OPERATION SECTION  
PHONE: 410-787-7652

## PHASE CHART

| 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| (R) | (R) | (R) | (R) | (R) | (R) | (R) | (R) | (R) |
| (Y) | (Y) | (Y) | (Y) | (Y) | (Y) | (Y) | (Y) | (Y) |
| (G) | (G) | (G) | (G) | (G) | (G) | (G) | (G) | (G) |

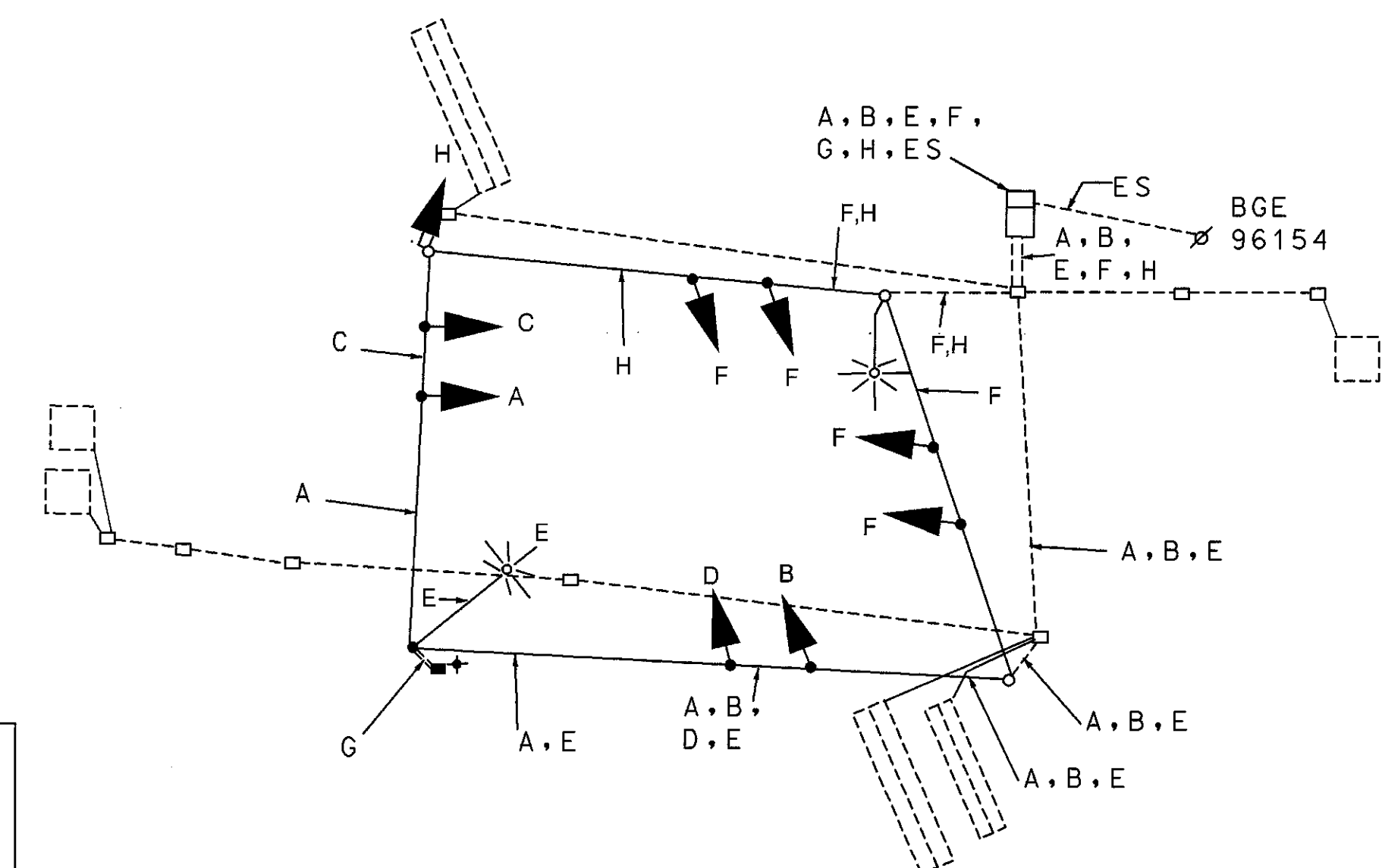
| PHASE 2 & 6           | G   | G   | G   | G   | R    | R    | R    | R    | R    |  |
|-----------------------|-----|-----|-----|-----|------|------|------|------|------|--|
| 2 & 6 CHANGE          | Y   | Y   | Y   | Y   | R    | R    | R    | R    | R    |  |
| PHASE 4 & 8           | R   | R   | R   | R   | G    | G    | G    | G    | G    |  |
| 4 & 8 Change          | R   | R   | R   | R   | Y    | Y    | Y    | Y    | Y    |  |
| FLASHING<br>OPERATION | FLY | FLY | FLY | FLY | FL/R | FL/R | FL/R | FL/R | FL/R |  |



## EQUIPMENT LIST (cont)

### C. ALL MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

## WIRING DIAGRAM



### WIRING KEY

- A } 7 CONDUCTOR ELECTRICAL CABLE
- B } NO. 14 AWG.
- H } NO. 14 AWG.
- C } 5 CONDUCTOR ELECTRICAL CABLE
- D } NO. 14 AWG.
- E - 2 CONDUCTOR ELECTRICAL CABLE  
NO. 12 AWG TYPE TRAY.
- F - REWIRE THE EXISTING CABLES TO  
THE PROPOSED SIGNAL HEADS.
- G - NO. 6 AWG STRANDED BARE  
COPPER GROUND WIRE.
- ES - EXISTING UNDERGROUND SERVICE.
- \* GROUND ROD

BAI

BRUDIS & ASSOCIATES, INC.  
CONSULTING ENGINEERS

9220 RUNSEY ROAD, SUITE 110  
COLUMBIA, MARYLAND 21045  
(410)-884-3607



MARYLAND DOT - STATE HIGHWAY ADMINISTRATION  
Office of Traffic & Safety  
TRAFFIC ENGINEERING DESIGN DIVISION  
GENERAL INFORMATION SHEET

MD 146 AND HESS ROAD

|                         |                       |              |                     |
|-------------------------|-----------------------|--------------|---------------------|
| DRAWN BY: E. MILESKY    | F.A.P. NO.            | TS NO.       | SHEET NO.<br>2 OF 2 |
| CHECKED BY: R. MILSTEAD | S.H.A. NO.            | 3296 A       |                     |
| SCALE: NONE             | COUNTY: HARFORD       | T.I.M.S. NO. |                     |
| DATE: 07/10/02          | LOG MILE: 12014600.81 | F-240        |                     |